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Feature Article

Model Low-Carbon Communities to Be Established

Fifty model low-carbon communities will be established by the end of 2011 and six low-carbon cities will be established by 2014 as part of a plan to reduce carbon emissions and gradually turn Taiwan into a low-carbon nation. By 2020 the island will be divided into four low-carbon living spheres in northern, central, southern, and eastern Taiwan.

The greenhouse effect and global warming are problems that all of mankind has to face together. The major emitters of CO_2, such as industry and energy suppliers, naturally have the greatest responsibility toward cutting greenhouse gas emissions. However, nearly one third of the nation's CO_2 emissions come from activities that are closely connected to the daily life of the average citizen, including transport, housing construction, commercial activity, agriculture, and livestock husbandry. Reducing emissions is thus everyone's responsibility, and the best way to do this is to create a low-carbon living environment that people can easily adapt to.

National Energy Conference Calls for the Creation of 50 Low-Carbon Communities

In order to accelerate the move toward a low-carbon society, the 2009 National Energy Conference suggested a ten-year timetable for implementing the "Creating a Low-Carbon Homeland" plan. The plan calls for the establishment of two model low-carbon communities in every municipality by 2011, which will mean a total of 50 low-carbon communities around Taiwan. Six cities will also be designated low-carbon cities by 2014, and by 2020 the island will be divided into four major low-carbon living spheres in northern, central, southern, and eastern Taiwan (see diagram).

Establishing a low-carbon homeland will not only require changes to energy consumption structures; gradually substituting fossil fuels with renewable energy sources will require the support of new technologies and facilities in the fields of alternative energy conservation, emission reductions, and

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efficient design. Even more crucial to effective emission reduction is cultivating people's awareness of the importance of low-carbon lifestyles as a way of improving overall quality of life and living in closer harmony with nature. Planning and implementing such a large-scale scheme will be very challenging due to the high degree of complexity involved. The EPA is thus promoting it in stages, starting with this small-scale experiment with low-carbon communities to test the feasibility of a low-carbon economy. Success in the experiment will lead to the plan being gradually implemented in the six cities, and eventually the four major low-carbon living spheres.

A Tripartite Policy: Low-Carbon Communities, Green Energy Industry, Green Lifestyles

The EPA has formulated a strategy for bringing about a low-carbon society that is based on promoting low-carbon communities, green energy industries, and green lifestyles. This strategy aims to encourage green energy developers, financial organizations, and private investors to invest in local communities. On the one hand this will lead to greener lifestyles for local residents, increase employment opportunities, and create an environment conducive to the organic growth and duplication of such communities. It will also act as a policy platform to give energy service companies (ESCOs) the chance to participate in the building of low-carbon communities.

Key points in promoting low-carbon communities:

1. Community selection criteria: In principle, the EPA will use the "village/borough" as the unit for promoting low-carbon communities. The EPA has drawn up the Low-Carbon Model Community Selection Criteria Working Principles that local governments must refer to when choosing the 98 communities whose details will be submitted to the EPA for evaluation. The EPA team of experts that will carry out on-site evaluations of the 50 selected low-carbon communities will refer to the Low-Carbon Model Community On-Site Inspection Team's Working Handbook.

2. Combining central government resources with interdepartmental promotion at the local government level: Low-carbon communities and cities will be given priority when allocating central government resources and funds that have been budgeted to plans related to the national Energy Conservation and Carbon Reduction campaign. For example, the Ministry of Economic Affair's Bureau of Energy has already designated these communities as targets for grants for 2010, and the EPA also provided guidance to 16 communities to obtain other grants. The low-carbon communities and cities will also benefit in the future from the prioritized installation of intelligent electricity meters and the adoption of intelligent green building design.

The EPA also asked local governments to set up Low-Carbon Homeland Promotion Task Forces, which all of the nation's local governments have already done. These task forces will be charged with coordinating and integrating manpower and funds from government departments, bureaus, and offices so that resources are concentrated where they will be most effective for the implementation of low-carbon measures.

3. ESCOs and the low-carbon communities: On 22 April 2010 the EPA signed an agreement with a number of ESCOs to establish the Energy Source Service Strategic Alliance. In future, the alliance will ensure that every low-carbon community has the assistance of an ESCO for managing energy resources, finding ways to save energy, and suggesting feasible improvements. Funding for material investment, improvements, and operational services will be available from banks in the form of self-liquidating loans. These loans will be repaid using the income from feed-in tariffs and savings in energy expenses. The EPA will also be guiding private and public enterprises that need to trade carbon credits on how to participate, which will be beneficial to ensuring that the communities operate on a sustainable basis.

4. Electric Vehicle Strategic Business Alliance: On 22 April 2010 the EPA also formed the Electric Vehicle Strategic Business Alliance with makers of electric vehicles and battery manufacturers. The alliance has already agreed upon a set of standard specifications for batteries and rechargers for electric vehicles so that vehicle manufacturers will be able to produce electric vehicles that carry easily-removable batteries. A system for renting the batteries and a scale of rental charges has also been created, along with a widespread network of recharging and exchange stations. Establishing an infrastructure that facilitates the exchange and recharge of batteries will go a long way toward overcoming

the inconvenience of battery recharging and the comparatively high price of electric vehicles.

5. Seven specific measures to reduce carbon emissions: For use in communities, scenic areas or sites of cultural interest, these measures can be implemented individually according to local circumstances or integrated with others, and are ways for the general public to reduce carbon emissions in their daily lives.

(1) Using renewable energy sources: Including solar-powered lighting, solar-powered water heaters, small/medium-sized wind turbines, and biofuels as alternatives to burning fossil fuels.

(2) Saving energy: By using energy-efficient domestic appliances and lighting, and by installing intelligent electricity meters.

(3) Eco-friendly transport: Walking, cycling, taking public transport, and using other low-polluting means of transportation.

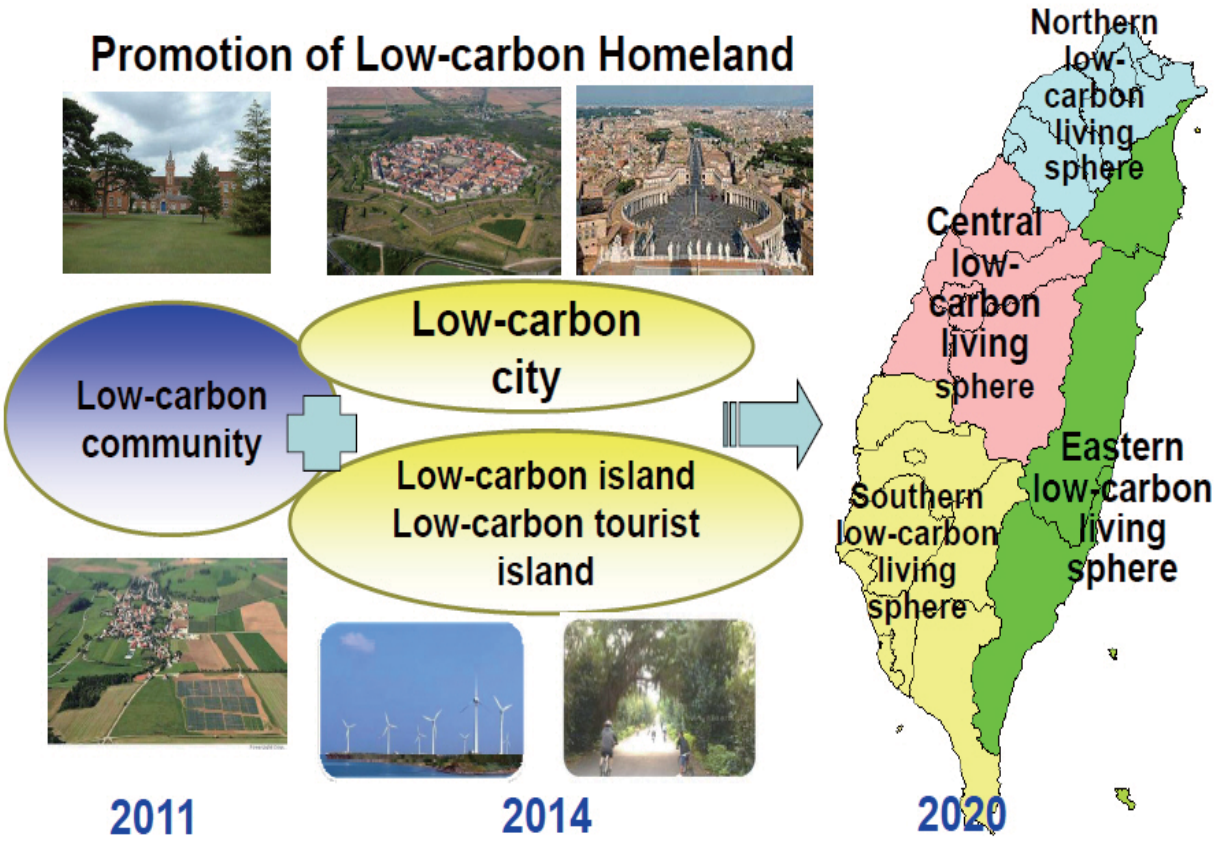
(4) Recycling and reuse of resources: Reducing amounts of refuse produced at source and recycling any recyclable waste for reuse. Catching and storing rainwater and reusing household gray water for flushing toilets, watering gardens, and washing vehicles etc.

(5) Low-carbon construction: Using green architectural concepts, materials, and building methods to construct buildings that produce minimum waste, are energy-efficient, and healthy to live in.

(6) Greening the environment: By planting trees, hedges, and gardens in local communities.

(7) Low-carbon lifestyles: Practicing green consumption whenever possible, including foodstuffs, clothing, household items, transportation, education, leisure, and entertainment.

6. Establishing systems of low-carbon assessment indices and low-carbon labeling for local communities: Plans are being drawn up to use data from the model low-carbon communities to calculate carbon emission volumes for use as assessment indices.



Timetable for the promotion of the Low-Carbon Homeland plan

This data will be relevant to the communities' production and consumption of electricity, water, oil, gas, and waste. A public competition will also be held to choose a suitable award label that low-carbon communities can display with pride. Members of the public will be invited to vote online along with a number of experts and scholars.

7. Education and guidance: On 4 June 2010 the EPA held the Low-Carbon Homeland Promotion Strategy Symposium. The EPA also uses its popular Ecolife Web site (http://ecolife.epa.gov.tw/), which takes advantage of the speed and transparency of online content, to make available knowledge and data pertaining to the Low-Carbon Homeland program. The Web site is also used to make public results and assessments of the performances of counties, cities, townships, and villages around the nation in promoting low-carbon communities. .

Low-Carbon Homeland Strategies Unique to Each Locality

Promoting the Low-Carbon Homeland policy involves many levels of implementation. All plans and measures will require sustained coordination and cooperation between the government, enterprises, organizations, and the people.

1. Many cities in other countries have already picked up on the low-carbon community concept and have started planning and implementing carbon reduction targets, strategies, and policies. Although the experience of many countries is that low-carbon homeland schemes do not succeed on the first attempt, some low-carbon communities are now up and running. Building large-scale low-carbon communities such as in cities, however, involves medium- to long-term planning, and those governments that have expressed the political will to do so are still drawing up their plans for trial models. Policy planning and implementation will require mutual cooperation between each government agency regarding the investment of funds and manpower.

2. Every community or city has its own unique circumstances, including geography and environmental resources. Any successful low-carbon measures must accord with local circumstances, making each case impossible to replicate in another community. Another problem awaiting resolution lies in the high-tech nature of many low-carbon measures which hinders the building of trusting relationships leading to the signing of cooperative agreements between the ESCOs brought in by the EPA and the local communities.

3. Creating low-carbon communities and cities will require unstinting effort and continuous upgrading. Due to the long-term nature of the projects involved the overall costs will naturally also be enormous. Thus the importance of grants from the central government and the participation of the general public cannot be overstated. Government funding does, however, have its limits, and so it will be necessary to attract investment from the private sector in the form of bank financing, corporate donations, and adoption schemes.

4. The successful establishment of low-carbon communities and cities will be predicated on their ability to create economic benefits and a better quality of life for residents in order to attract public interest. It is thus imperative that the scale of support of new technologies and facilities is of an order that will make the creation of a low-carbon economy feasible. The main problem in this respect is that energy-saving and renewable energy facilities and technologies are still expensive when compared to traditional fossil-fuel power generation. Taiwan is thus actively promoting the "National Energy Technology Plan" and the "Green Energy Promotion Plan."

Feature Article

2011 Reduction Target for Plastic Trays and Packaging Boxes Raised to 35%

On 8 August 2010 the EPA announced a revision to the regulation limiting the use of plastic trays and packaging boxes. The reduction targets for hypermarkets and supermarkets for the second half of 2010 is now 30%; for the whole year it is 27.5%. The target for 2011 will now be 35%.

The EPA explains that the purpose of the revision is to save resources by gradually reducing the use of plastic trays and packaging boxes that are manufactured from fossil fuels, a non-renewable resource. The EPA first started requiring hypermarkets and supermarkets to begin annually decreasing the amount of plastic packaging used to box fresh produce, eggs, and bakery products in July 2007. The reduction targets for the first two years were 15% and 25%, respectively. The use of plastic was reduced mainly by either doing away with trays and boxes completely or by using thinner plastic for them. If employing these methods did not result in the targets being reached, then materials other than plastics were used for packaging. Retailers were given the freedom to choose which reduction methods best suited their own operations and foodstuffs.

The EPA points out that following the introduction of the reduction scheme the amount of plastic from non-renewable resources used for packaging was reduced by 1,400 tonnes from July 2007 to December 2009. As for the reduction methods employed, by the second year of the scheme up to 30% of the products in question were being sold unpackaged, which goes a long way toward relieving the burden on waste disposal operations and decreasing disposal costs. Furthermore, from 1 July 2007 to 30 June 2008 the average reduction rate for hypermarkets and supermarkets was 21%. From 1 July 2007 to 31 December 2009 this average rate increased to 33% and all of the retailers participating in the scheme achieved the original target. For the period ending on 31 December 2009, over 70% of the retailers were able to attain a reduction rate of 27.5% and over 40% of the retailers were able to reach 30%, ample proof of their willingness to reduce the use of plastic packaging and thus the consumption of non-renewable resources.

The announcement states that hypermarkets and supermarkets have until 31 August and 30 November 2010 to submit reduction plans for the second half of 2010 and the whole of 2011, respectively. Plans should be submitted to the EPA or local environmental protection bureaus. Results of reduction efforts from the previous year need to be submitted before 31 March. For 2010, the businesses can either plan to achieve a reduction rate of at least 25% for the first half of the year and 30% for the second, or they can plan to reduce packaging by at least 27.5% over the whole year. The rate for 2011 will be 35%. Operators who fail to reach the specified targets, or do not submit reduction plans or reduction results to the EPA, will be fined NT$30,000~150,000.

Details of revisions to Articles 3 and 5 of the regulation governing the use of plastic trays and packaging boxes can be downloaded from the EPA Web site dealing with environmental protection regulations: http://ivy5.epa.gov.tw/epalaw/.

Control & Evaluation

Compensation for Livelihood Losses from Formosa Plastics Fire not to Exceed NT$500 Million

On 23 August 2010 the government of Yunlin County convened its third coordination meeting to discuss compensation to farmers, fishermen, and livestock owners for losses resulting from the fire at Formosa Plastics sixth naptha cracker plant. It was agreed that the upper limit for the compensation package should be NT$500 million.

The meeting was chaired by Yunlin County Deputy Magistrate Lin Yuan-chuan, and was also attended by the mayors of Mailiao and Taisi townships, the chairpersons of the townships' representative councils, and representatives from the farmers and fishermen associations and Formosa Plastics. The meeting was convened in order to reach a settlement regarding compensation to farmers, fishermen, and livestock owners for their losses and to agree on how the compensation package should be distributed. Attendees also raised the point that Formosa Plastics should also offer appropriate compensation for the long-term effects of the pollution caused by the sixth naphtha cracker accident on the environment and health of local residents, for which the EPA will assist the Yunlin County government in negotiating a settlement.

At the meeting EPA representatives explained the procedure for resolving cases of public nuisance disputes. If agreement on a settlement cannot be reached then the parties can apply to the local government for mediation. The local government will then convene its public nuisance dispute mediation committee, which is chaired by the county magistrate and made up of members chosen by him or her. If a settlement still cannot be reached then the parties can apply to the EPA's Public Nuisance Arbitration Committee for Arbitration.

Four other suggestions were also raised during the meeting, including the idea that a team of experts should be formed to inspect damages and assess the loss of livelihood to farmers and fishermen resulting from the fire. It was also suggested that independent, objective working teams should be added to the environmental impact assessment spatial distribution review panel currently working at the sixth naphtha cracker site. These two teams would be charged with verifying the Yunlin County government's preliminary report on agricultural and fisheries damages and the preliminary environmental impact spatial distribution report. Each team would be composed of two experts recommended by each of the concerned parties. The results of their independent, objective assessments would be sent to the Yunlin County government.

The EPA will make every effort to help residents of the Mailiao area to negotiate a fair compensation package for environmental damages arising from Formosa Plastics operations. The administration will also make available any useful technical data on environmental impact spatial distribution around the sixth naphtha cracker site to aid the Yunlin County government and Formosa Plastics in negotiating compensation distribution details with local residents.

Recycling

Discount Takeaway Beverages for Eco-Aware Customers Starting Next Year

The EPA is keen to encourage the general public to reduce the amount of disposable beverage cups being used, which will also mean fewer that need recycling. To this end, the EPA has been researching and formulating a draft of the Monetary Awards Scheme and Implementation Methods for Promoting the Recycling of Disposable Beverage Cups (廢一次用外帶飲料杯回收獎勵金數額及實施方式). The scheme is forecast to go into effect on 1 January 2011.

There has been a large rise in the volumes of disposable beverage cups being used in recent years: It is estimated that chain stores retailing beverages, coffee, and fast food, along with the 24-hour convenience stores, use around 1.5 billion of these cups annually. This is obviously a significant consumption of natural resources and if the cups are disposed of thoughtlessly, as is sometimes the case, they end up blocking drains or floating down rivers to accumulate on riverbanks and beaches. The result is an unsightly mess that damages fragile ecologies. Fortunately, a large number of people from environmental protection groups and the public at large have become concerned about the problem.

In recent years the EPA has already brought together operators of made-to-order beverage retail outlets in order to promote measures that reward customers who bring their own cups when buying takeaway beverages. A number of businesses have already been using this model for sometime, and a meeting in April of this year resulted in the total number being raised to 40 brands that are sold at 11,000 different retail outlets. This represents over 70% of the total of Taiwan's made-to-order beverage retailers. These retailers are now giving rewards to customers who bring their own eco-cups when buying takeaway beverages regardless of the make of the cup. The rewards can take the form of a cash discount, reward points, or an increase in beverage volume. As an incentive to operators of beverage chain stores to reduce the use of disposable cups at source the EPA is allowing these stores to opt out of a cash-for-cups recycling scheme as long as they submit a disposable cup reduction plan for approval by the EPA. They must also allow customers to use any brand of eco-cup and offer discounts to those who do.

Starting on 1 January 2011 chain stores retailing beverages, coffee, and fast food, along with the 24-hour convenience stores can submit their plans for reducing disposable cup use at the source and offering discounts to customers who use any brand of eco-cup. Operators who do not submit such plans will have to abide by a cash-for-cups recycling scheme that will require them to pay NT$1 for every two of their own disposable cups that are returned to any of their retail outlets by members of the public.

Despite prodding from the EPA, there are still a number of businesses that are not yet rewarding customers who bring their own cups when buying takeaway beverages or only reward customers that buy and use the store's own brand of eco-cup. As a result, the EPA is drawing up a cash-for-cups recycling scheme, pursuant to Article 22 of the Waste Disposal Act (廢棄物清理法), that will be applied to businesses that do not submit disposable cup reduction plans to the EPA. This scheme will require these operators to print their company logo and the recycling cash reward amount on their disposable cups so that members of the public know that they can claim NT$1 per 2 cups returned to the vendor. Businesses will thus be forced to bear some of the costs of recycling the vast quantities of disposable cups that they use.

In addition, and in accordance with Article 19 of the Waste Disposal Act the EPA is also planning to require beverage and coffee chain stores that have not set out recycling bins for their customers' used cups to do so. The bins will provide the public with another recycling option for their used cups and should be modeled on the ones used by 24-hour convenience stores.

Water Quality

Taiwan to Become First Nation to Control Gallium, Indium, and Molybdenum in Wastewater

In order to strengthen controls over wastewater produced by high-tech industries the EPA will soon make revisions to the effluent discharge standards for the optoelectronics industry. Taiwan will become the world's first nation to enforce restrictions on gallium, indium, and molybdenum in wastewater, as well as on levels of total toxic organics (TTO) and the degree of acute organism toxicity (TUa) permissible. A preannouncement of the draft will be forthcoming.

As a result of recent public concern about the toxicity of wastewater from optoelectronics factories the EPA will make revisions to the effluent discharge standards. The new restrictions will cover gallium, indium, and molybdenum in wastewater, as well as levels of TTO and acute organism toxicity. A preannouncement of the draft will be followed by consultations with relevant parties and public meetings in accordance with legal procedural requirements before the revision is officially announced.

The EPA is keen to point out that the new restrictions on the three heavy metals - gallium, indium, and molybdenum - are the first of their kind anywhere in the world. These toxic metals are used primarily in the manufacture of optoelectronics products and end up in wastewater as a result of washing during the manufacturing process. Although the impact of these metals on human health and the environment has yet to be clearly determined, and improvements in the manufacturing process have allowed for less discharge of these metals, the EPA has decided to play it safe by listing them as controlled substances. As for TTO, taking into account that some environmental impact assessments have already included U.S. maximum values in their promises, the EPA decided to list them as controlled substances at the same time for the sake of completeness. As for substances in wastewater of the optoelectronics industry which cannot be easily identified or whose environmental impact is unclear, the EPA will measure TUa, which involves a non substance-specific test to determine the effect of microsubstances in the wastewater on living organisms.

Based on the maximum values to be included in the upcoming draft regulation and the results of wastewater quality inspections, the EPA estimates that about 20% of manufacturers will have to increase their reduction of acute organism toxicity caused as a

result of manufacturing processes. Reduction methods that could help them to stay within the new maximum values include changing the chemicals that they use and reinforcing safeguards to prevent waste solvents from entering wastewater. The EPA will be giving manufacturers a grace period in which to gradually implement improvements to wastewater quality in the hope that this will make the new restrictions more effective.

The EPA is well aware that the pace of change in industry can be quick and will thus continue to carry out water quality inspections for all categories of industry for the purpose of formulating suitable wastewater quality standards that take into account the special nature of manufacturing operations. The EPA will also start to build a list of candidates for suitable discharge water controls in order to conduct rolling reviews of discharge water standards.

Table of items to be controlled under the Optoelectronics Industry Discharge Water Standards (draft)

Items	Control standard
TUa	1.43 mg/L
TTO	1.37 mg/L
Indium	0.1 mg/L
Molybdenum	0.6 mg/L
Gallium	0.1 mg/L

Climate Change

Taipower and TMA Team Up to Fight Global Warming by Reducing SF_6 Emissions

In 2003 and 2004 the EPA signed greenhouse gas voluntary reduction memorandums with Taiwan's optoelectronics and semiconductor industry associations. The EPA continued this trend in 2010 by bringing about the signing, on 1 September, between Taiwan Power Corporation (Taipower), and the Taiwan Magnesium Association (TMA) of a cooperative memorandum stating their intention to reduce sulfur hexafluoride (SF_6) emissions. EPA Minister Stephen Shu-hung Shen attended the signing to witness this fine example of inter-industry cooperation.

CO_2 has been the greenhouse gas that has attracted the most international attention in the past. However, with the rapid development of industry worldwide other greenhouse gases with Global Warming Potential (GWP), of which SF_6 is one, are gradually becoming a cause for concern.

According to the reports from the Intergovernmental Panel on Climate Change (IPCC), the GWP for SF_6 is 22,800, which means that 1kg of SF_6 emitted into the atmosphere has the greenhouse effect potential of 22.8 tonnes of CO_2. This is the reason why the EPA has listed it as a top priority for reduction even though SF6 only accounts for about 3% of Taiwan's total greenhouse gas emissions.

The bulk of Taiwan's SF_6 emissions come from the optoelectronics, semiconductor, power generation, and magnesium industries. Since the EPA signed SF_6 voluntary reduction memorandums with Taiwan's optoelectronics and semiconductor industry associations there has been an estimated reduction in emissions in carbon dioxide equivalent (CO_2e) of 24 million tonnes. As for the electricity generation industry, their emissions of SF_6 come mainly from leakages arising from the insulation of high-voltage facilities. As a result, since 2006 the EPA has been actively promoting the recycling of SF_6 from the electricity generation industry and in 2009 completed R&D into purification and reuse technology for this type of SF_6. Testing has shown that when the water and impurities are removed and the waste SF_6 is purified in the correct manner then it can be used directly by the magnesium industry, which is of great benefit in reducing Taiwan's emissions of this greenhouse gas. This is the reason why the EPA has been keen to promote the cooperation between the power generation and magnesium industries that has

resulted in this year's joint signing of the emission reduction cooperative memorandum.

The emission reduction cooperative memorandum is expected to cover a period of ten years. The memorandum states that Taipower will regularly supply the TMA with information on its stock of waste SF_6, following which the TMA will then have one month in which to assess how much of it they want. Both parties have also agreed to jointly conduct R&D into SF_6 emission reduction technology and to make their findings public at relevant symposiums both in Taiwan and overseas. The EPA is acting as the witnessing unit to the cooperative memorandum and will also be supplying both parties with up-to-date emission reduction information from Taiwan and overseas to facilitate tasks relevant to emission reduction.

In recent years there has been a gradual shift in international requirements toward greenhouse gas emission control away from a nation-centric system toward an industry-centric system. Industry in Taiwan is still export-driven, and thus the work of greenhouse gas emission reduction is an integral part of maintaining the international competitiveness of the nation's manufacturers.

EPA Minister Stephen Shu-hung Shen witnessing the signing of the SF_6 emission reduction cooperative memorandum between representatives of Taiwan Power Corp. (left) and the Taiwan Magnesium Association (right)

Environmental Sanitation

Five Districts to Be Subsidized as Model Green Districts in 2011

In order to carry out the "Building High-Quality Model Green Districts" plan, the EPA invited a number of experts and scholars to form an inspection committee to choose the first five candidate districts. After a dual-stage assessment process, the committee revealed its choices on 10 August 2010. They were: Nangang District in Taipei City, West District and Nantun District in Taichung City, North District in Tainan City, and Mituo Township in Kaohsiung County.

The EPA points out that effectively improving public sanitation and creating high-quality, sustainable living environments will require the participation of all of the nation's residents. In September 2008 the Executive Yuan approved a 6-year plan to foster sustainable, high-quality environmental sanitation nationwide. Each municipal and local government will be allowed to put forward two townships or

urban districts that have an excellent environmental scorecard. They can then integrate their departmental resources to form a team to draw up a plan that will highlight the strengths and special characteristics of the two districts based on environmental protection concepts. The plans will outline how they should perform according to 14 environmental sanitation sustainability indices to create high-quality green model districts. The EPA will provide engineering grants of up to NT$20 million based on evaluations of the plans. The whole scheme once again demonstrates the government's commitment to integrating central government, local government and private sector resources.

The five districts to be funded in 2011, and their improvement themes that the selection committee approved of are: "Improving our homes and building a high-quality living environment where the smell of osmanthus wafts on the breeze" (Taipei City Nangang District); "Regenerating the whispering willows West District" (Taichung City West District); "The scenic streets of old Nantun come alive again" (Taichung City Nantun District); "A multicultural world tourist city, a high-tech, high-employment Asian city, and a prosperous garden city" (Tainan City North District); "Clean and tidy homes; bright and pretty Mituo" (Kaohsiung County, Mituo District).

The EPA will use the Building High-Quality Model Green Districts plan as a benchmark model to encourage local governments to see local advantages and unique features in terms of promoting model area environmental management systems, the 5S campaign, greening the environment and demonstrating the model community concept. Eventual attainment of the 14 environmental sanitation sustainability targets will mean that Taiwan will have significantly raised the quality of its living environments, and made residential areas quieter, tidier, and more hygienic. Achieving these goals will also promote economic development and job opportunities, and speed up the regeneration of urban areas and the building of sustainable eco-cities.

Ecolabeling

EPA Inspections Confirm that All Green Mark Recycled Paper is the Real Deal

The EPA recently conducted a round of inspections of paper mills that supply pulp for makers of Green Mark paper products being sold in Taiwan. All of the pulp inspected was found to contain minimum or above proportions of recycled paper.

The EPA decided to act after learning about a recent scam in Japan which involved false reporting of amounts of waste paper that were being used in reusable paper. News of the scam resulted in less willingness among Japanese consumers to buy recycled paper. The strengthening of the recycled paper inspection regime also gave the EPA an opportunity to promote resource recycling in general. Of the toilet paper, napkins, copy paper, office paper, file folders, corrugated cardboard boxes, and packaging paper currently being sold in Taiwan, there are 83 products that have been awarded the Green Mark because they contain 40~100% recycled waste paper.

In order to verify that the Green Mark products contain minimum or above proportions of recycled waste paper the EPA conducted the on-site inspections of the 13 paper mills between 20 May and 8 June 2010. The EPA inspectors were accompanied by accountants and scholars who assisted in inspecting production processes and raw materials usage, daily production report tables, and raw material quality reports.

Results from this special round of inspections proved that all of the Green Mark products meet requirements for proportions of waste paper mixed in with the pulp. These products thus meet some of the eco-friendly criteria for reusable paper, being recyclable and resource-saving.

Green Mark products generally have to meet the three main environmental criteria of being recyclable and creating as little pollution and using as few resources as possible. Each tonne of recycled waste paper used for paper production means 20 fewer trees being chopped down. The EPA has thus introduced standards for four new categories of paper products: Office Paper Containing Recycled Waste Paper; Toilet

Paper Containing Recycled Waste Paper; Stationery and Writing Paper Containing Recycled Waste Paper; and Packaging Paper Containing Recycled Waste Paper. All of these kinds of paper product should contain at least 40~100% recycled waste paper, which will help to save forest resources. Some of the major paper companies in Taiwan producing these products include Cheng Loong Corp., Yuen Foong Yu Corp., Shihlin Paper, and Taiwan Pulp and Paper Corp.

As well as specifying the content of recycled waste paper, the standards for Green Mark reusable paper products have also just been revised to stipulate that, from 31 December 2010 applications must be accompanied by certification from the Forest Stewardship Council or the Programme for the Endorsement of Forest Certification. These two internationally-accepted certifications are needed to prove that the paper products contain original pulp only from managed forests, not from old-growth forests.

Recycling

Certification Regulation Amended to Include Permissible Rate for Fertilizer Containers

The EPA is constantly trying to raise administrative efficiency, and to this end from 1 July 2010, recycling and treatment enterprises will have to submit registration applications, operations reports, and other documentation online.

The EPA is encouraging recyclers and farmers to separate waste fertilizer containers from pesticide containers. Relevant protocols to the inspection and certification regulations for incinerators were amended, and now, no more than 4% of waste pesticide container loads accepted by incinerators can consist of waste fertilizer containers.

About 1,000 tonnes of pesticide and special environmental agent containers are recycled annually. Although waste fertilizer containers are classed as ordinary waste plastic containers, after use by farmers they are usually mixed in with pesticide containers for recycling or disposal. In order to correct the current problem of waste fertilizer containers being incinerated with waste pesticide containers rather than being recycled along with ordinary plastic containers, the EPA has added the new requirement that no more than 4% of waste pesticide container loads accepted by incinerators can consist of waste fertilizer containers. Exceeding 4% will result in the operator's subsidy being deducted in proportion to the excess weight of waste fertilizer containers. In addition, waste pesticide containers made of other materials such as metal and glass will be classed as mixed material and will therefore not be eligible for subsidies.

The latest revision will make the current recycling of pesticide and fertilizer containers more comprehensive. Members of the public who wish to learn more about the revisions to the Protocols for the Incineration of Waste Plastic Pesticide and Special Environmental Agent Containers can download details from the EPA Web site http://ivy5.epa.gov.tw/epalaw/. Information relevant to the recycling and disposal of waste pesticide containers can also be obtained by calling the dedicated recycling hotline number: 0800-085717.

News Briefs

New Subsidy Rates for Waste Recycling and Disposal Announced

New subsidy rates for waste recycling and disposal that accord with the Management Regulations for the Review of Applications for Recyclable Waste Recycling, Clearance, and Disposal Subsidies (應回收廢棄物回收清除處理補貼申請審核管理辦法) were recently announced. The new rates took effect on 1 July 2010.

The new rates are shown in the table below:

Table of new subsidy rates for waste recycling and disposal

Item	Amount of subsidy
Waste tires	1. Waste recycling and disposal subsidy: NT$3.2/kg 2. Waste recycling and disposal subsidies for tires with inner diameter of 24 inches or more: (1) Farm vehicle tires: NT$500/each. (2) Other tires: NT$1,800/each.

Waste lead-acid batteries	Waste recycling and disposal subsidy： 1. Ordinary lead-acid batteries：NT$ 1.75/kg 2. Special lead-acid batteries：NT$ 5/kg
Waste lubricating oil	1. To be regulated from 1 July 2010 to 30 June 2011 according to the content of the attached table. 2. Waste recycling and disposal subsidy will be NT$0/kg from 1 July 2011 to 31 December 2011.
Waste electronic & electrical appliances	Waste recycling and disposal subsidies： 1. Waste TVs: NT$ 379.5/each; Waste LCD TVs: NT$ 303/each 2. Waste washing machines: NT$ 346.5/each 3. Waste refrigerators: NT$ 635.5/each 4. Waste air conditioners: NT$ 500/each

Seven Southern Cities and Counties Launch Clean-Up Campaign as Dengue Fever Spreads

The EPA has decided to act quickly to slow the spread of dengue fever by dispatching personnel to seven southern municipalities to help in eradicating breeding sources for disease-vector mosquitoes. Eradication efforts will include clearing away outdoor containers and piles of junk in which water accumulates, and special attention will be paid to looking for and cleaning out derelict buildings. EPA personnel are assisting the seven cities and counties (Kaohsiung City and County; Chiayi City and County; Tainan City and County; and Pingtung County) mobilize three tiers of personnel to help in the eradication of mosquito breeding sources. Chemical agents are also being employed.

Dengue fever has been spreading in the southern part of Taiwan and a 75-year old citizen of Kaohsiung recently died of hemorrhagic dengue fever. There are four types of dengue fever virus and hemorrhagic dengue fever is often caused when a patient contracts two of them simultaneously, which can lead to life-threatening complications.

Night Markets Taking Toll on the Environment: EPA Calls for Improvements

A recent online ballot for Taiwan's most eco-friendly night market was marked by poor participation from the night market side. The EPA will thus start working closely with local governments to make night markets more eco-friendly, which will hopefully also make them more attractive to tourists. The EPA will conduct a thorough review of the measures already in place which include promoting less reliance on disposable eating utensils, proper refuse segregation, and acceptable standards of overall environmental hygiene. The EPA will also soon be calling meetings with night market managers, competent authorities, and local environmental protection bureau officials to try and come up with some new ideas for improvements. Last but not least, the EPA is also calling on the public to keep environmental protection in mind when they are choosing which snacks to buy at night markets in order to encourage market management and stallholders to go green.

2010 Marine Pollution Prevention Week

On 30 August 2010 the EPA held a series of activities in connection with the 2010 Marine Pollution Prevention Week. One of these was the International Workshop on Marine Pollution Prevention, to which scholars from Canada, the UK, Japan, and Taiwan were invited to discuss the latest international trends in marine pollution prevention. Held at the same time was the Taiwan – China Marine Pollution Prevention Symposium. This event was hosted by Taiwan's Marine Pollution Prevention Association with guests invited from the China Institute of Navigation. The president of the institute led a delegation of 15 that included government experts on marine accidents, salvage, and search and rescue. Besides discussing developments in marine oil pollution prevention the participants also simulated a cooperative response in the event of an oil spill in the Kinmen-Xiamen area.

The international experts who attended the International Workshop on Marine Pollution Prevention enjoyed wide-ranging exchanges of ideas on a variety of topics. These included reflections on oil spills in the Gulf of Mexico; assessment and analysis of navigational safety in Japan's La Perouse Strait; suitable contingency plans for responding to serious oil spills; and marine oil pollution simulation systems. The symposium was a big step forward toward promoting regional cooperation in the event of a marine pollution incident.

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